From

Memorandum

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To : Jananne Sharpless, Presiding Member Robert A. Laurie. Associate Member

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Subject: High Desert Power Project (97-AFC-1) Status Report Number Three

The Committee's April 9, 1998 "Notice of Second Committee Status Conference" directed staff and other parties to: 1) inform the Committee on the status of the High Desert case, including any potential delays; 2) address other parties' comments contained in the second status reports (filed March 25, 1998) and in the third status reports (due April 24, 1998); and 3) discuss any other matters relevant to this proceeding. The purpose of this memorandum is to provide you our response to this order, and our recommendation on how analysis of the proposed project should proceed.

STATUS OF HIGH DESERT CASE

ADDITIONAL NATURAL GAS PIPELINE

On April 8, 1998, Mr. Richard Wolfinger announced that the applicant is considering an additional natural gas connection with the Pacific Gas and Electric or Kern River Pipeline systems. This connection will require a new 26 mile pipeline which would extend northward from the power plant site along Helendale Road to Kramer Junction near State Route 58. The applicant provided an overview of the proposal at the April 14, 1998 workshop, but did not have specific details of the proposal. The applicant indicated that biological surveys of the additional natural gas pipeline would begin soon. We suggested that the applicant consult with the Department of Fish and Game, U.S. Fish and Wildlife Services, and U.S. Bureau of Land Management regarding the survey protocol. We have scheduled a workshop on April 30, 1998 to discuss the information requirements for this amendment and to discuss environmental issues that may arise as a result of this new pipeline.

We will be unable to include this additional natural gas pipeline in the scheduled May 15, 1998 preliminary staff assessment (PSA). We believe that the applicant's request to have the Energy Commission consider the additional natural gas pipeline raises serious concerns of whether staff will be able to prepare a complete FSA regarding the additional natural gas pipeline within the project schedule, and thus, when the Energy Commission will be able to reach an affirmative decision regarding the additional natural gas pipeline within the mandated 12 months schedule for the High Desert

Power Project. We recommend that the applicant give serious attention to the scheduling issues raised by this proposal. In order for staff to fully address the environmental and engineering issues associated with the additional natural gas pipeline, we believe we must have complete environmental and engineering data 45 days prior to issuing the final staff assessment (FSA). (See the discussion below on project schedule for staff's recommendations on how to address the additional natural gas pipeline, as well as, the delays in delivery of other critical data and analyses for the project.)

AIR QUALITY

Determination of Compliance

At the April 14, 1998 workshop in Victorville, Mr. Bob Zeller, representing the Mojave Desert Air Quality Management District (District) indicated that the preliminary Determination of Compliance (DOC) would be three weeks late (i.e., would be provided on or about May 11, 1998 rather than April 20, 1998). Mr. Zeller indicated that the District had all the information it needed to conduct its analysis, but other unforeseen circumstances would cause a delay in delivery of the preliminary DOC.

We had originally hoped that the Preliminary Staff Assessment (PSA) would include a summary of the major findings of the preliminary DOC, identify issues or concerns raised by the preliminary DOC, and include DOC permit condition in staff proposed conditions of certification. Receipt of the DOC four days before the proposed filing date for the PSA means that we will be unable to incorporate the preliminary DOC in our PSA. Delay in delivery of the Preliminary DOC will also delay receipt of the Air Resources Board (ARB) and U.S. Environmental Protection Agency (EPA) comments on the Preliminary DOC, and thus delivery of the final DOC. The final DOC was originally scheduled on or about June 19, 1998 but is now expected on July 10, 1998. We need at least 14 days to incorporate the final DOC findings and permit conditions in the FSA. The final staff assessment (FSA) was scheduled to be filed on July 15, 1998. Delay of the final DOC will either mean that the FSA will not include the final DOC findings or permit conditions, or the FSA will need to be delayed until July 24, 1998. (See the discussion below on project schedule for our recommendations on how to address the delay in the preliminary and final DOCs, as well as, delays in delivery of other critical data and analyses for the project.)

Turbine Manufacturer's Data

During prefiling the applicant orally identified four potential turbine manufacturers for the project; i.e., General Electric, Westinghouse, Brown Boveri and Siemens. However, the AFC provided limited emission data for only three turbines (i.e., General Electric 7FA turbine for the 832 MW simple cycle configuration and 720 MW combined cycle configuration, Westinghouse 501F turbine for the 832 MW simple cycle

configuration and 720 MW combined cycle configuration, and Westinghouse 501G turbine for the 678 MW combined cycle configuration). In staff's March 25, 1998 status report we stated:

"On December 17, 1997, staff submitted data request numbers 9, 10, and 11 which asked for additional turbine manufacturer data to substantiate the "worst-case" emissions presented in the AFC. The applicant's January 15, 1998 responses to these data requests implied that specific turbine manufacturers data would not be provided until a decision had been made on which configuration to construct and which manufacturer would supply the project (i.e., post certification). In addition, the data responses did not provide enough information for staff to understand how the AFC "envelope" emission data were calculated. Staff understands the applicant's desire for flexibility but also believes its expectations are unreasonable given the lack of data provided. ...

Staff does not believe it necessary for the applicant to select a specific turbine manufacturer or turbine model at this time. However, staff needs the emission data for each turbine model under consideration in order to conduct its analysis. Staff is willing to conduct an analysis of the three turbines discussed in the AFC, but reluctant to assume that the emissions from the Brown Boveri and Siemens turbine options are "sufficiently similar" to the three turbines discussed in the AFC to presume that the PSA analysis will address the likely environmental consequences of these turbines. Therefore, at this time, staff only plans on conducting analyses for the turbines for which it has data (i.e., General Electric 7FA turbine for the 832 MW simple cycle configuration and 720 MW combined cycle configuration, westinghouse 501F turbine for the 832 MW simple cycle configuration and 720 MW combined cycle configuration, and Westinghouse 501G turbine for the 678 MW combined cycle configuration)."

At the April 14, 1998 workshop, the applicant asserted that they want the Energy Commission decision to not specific turbine manufacturer(s) or turbine model(s) (so that the applicant will be able to purchase from any one of the four turbine manufacturers), and questioned our need of specific turbine manufacturers data to conduct its analysis. The applicant indicated that they were not asking the District or staff to conduct analysis of specific turbine alternatives, but to conduct an "envelope analysis" based on a "worst-case" emission estimate. The applicant also asserted that the information supporting the "envelope emission" estimates was provided in an attachment to the information provide to the District on November 19, 1997 to make the Authority to Construct (ATC) permit application complete.

At the April 14, 1998 workshop, we noted that the information provided does not provide documentation from turbine manufacturers which would substantiate the applicant's "envelope emission" estimates. Moreover, wee noted that the startup emissions provided are lower than those provided for the General Electric and Westinghouse "F" class turbines in the Sutter Power Project AFC (97-AFC-2, data response number 1 received March 4, 1998).

The applicant at the April 14, 1998 workshop indicated that the emissions provided for the Sutter Power Project AFC for the General Electric and Westinghouse "F" class turbines might not be representative of the emissions for the High Desert Power Project, since these manufacturers offer more than one "F" class turbine. We provided

the applicant with a copy of the information provided for the Sutter Power Project AFC, and on April 20, 1998 we filed a complete set of Calpine's air quality responses to the High Desert Power Project proof of service list. At the April 14, 1998 workshop, the applicant promised to provide information for the startup of the Brown Boveri and Siemens turbines.¹

We note that emissions are only one aspect of turbine manufacturers data that will affect staff's modeling analysis of potential air quality impacts from the project. Stack parameters (i.e., stack mass flow rate, temperature, velocity, and dimensions) also affect the magnitude and location of potential air quality pollutant impacts, and thus, define the need for mitigation.

We believe the Energy Commission has the responsibility to identify appropriate measures or project alternatives necessary to mitigate a project's likely construction, operational or facility closure impacts. While the applicant is not required to select a specific turbine manufacturer at this time, it is important for us to have emission estimates and other related data to allow identification of impacts related to the turbine options the applicant is considering. Based on our preliminary air quality impact modeling assessment, we believe that there may be significant differences between the impacts from turbines being consider by the applicant, and we would like to present these differences to the Committee for its consideration. See the discussion below regarding the project's potential contribution to an ambient air quality nitrogen dioxide (NO2) standard violation.

The March 20, 1998 "Committee Order re: Specific Responses" stated:

"Staff's approach would also allow the public to readily understand the comparative impacts of each configuration, which also addresses concerns raised by CURE. This framework is not based on the composite "worst case" analysis offered by Applicant, but rather encompasses an evaluation of each configuration individually, including that of alternatives appropriate to each configuration.

The Committee agrees that, given the current project proposal, parties must identify impacts, appropriate mitigation, and <u>alternatives pertinent to each of the three configurations</u>. Furthermore, the Committee anticipates that the evidentiary record, which will be developed through future hearings, will address all issues relevant to each

¹ At the April 14, 1998 workshop Mr. Wolfinger stated that the applicant had startup emissions for the Brown Boveri and Siemens combined cycle configurations, but did not have startup emissions for the simple cycle since Brown Boveri and Siemens turbines do not offer a simple cycle configuration for these turbines. Mr. Wolfinger also stated that the applicant expected significant difference in the startup profile for the simple cycle and combined cycle configurations. First, we are unclear why the applicant is considering turbines for the simple cycle configuration which are apparently not available for sale, and second if the simple cycle configuration is not available why information on the simple cycle startup is necessary to provide estimates of the combined cycle startup emissions. We assume that these ambiguities will be cleared up once the applicant review the available data and submits estimated startup emissions with appropriate documentation.

configuration and provide a sufficient basis to support necessary findings for each configuration." [emphases added]

We believe that the Committee has already rejected the applicant's composite worstcase envelope analysis. In order to analyze the impacts associated with multiple turbines, we need the applicant to file the following information at least 45 days prior to issuing the FSA:

- 1. The turbine manufacturer and model numbers the applicant wants the Energy Commission to consider:
- Steady state emission estimates, including calculation assumptions and methods:
- Startup emission estimates and startup times for both simple cycle (if applicable), and combined cycle, including calculation assumptions and methods:
- 4. Documentation from the turbine manufacturers supporting the applicant's emission estimates; and
- 5. Stack parameters (i.e., stack mass flow rate, temperature, velocity, and dimensions).

Unless the applicant provides this information 45 days before we file our FSA, our impact analysis will be limited to those turbines for which we have data (i.e., General Electric 7FA turbine for the 832 MW simple cycle configuration and 720 MW combined cycle configuration, Westinghouse 501F turbine for the 832 MW simple cycle configuration and 720 MW combined cycle configuration, and Westinghouse 501G turbine for the 678 MW combined cycle configuration).

The information provided to the District in the ATC permit application (November 17, 1997) provided information for two turbines, General Electric 7FA turbine data for the 832 MW simple cycle and 720 MW combined cycle configurations and the Westinghouse 501G turbine data for the 678 MW combined cycle configuration. We also note that the information provided in the applicant's March 18, 1998 offset plan to the District is based on the General Electric 7FA and Westinghouse 501G turbine options. Although our planned analysis should be detailed enough to provide the flexibility the applicant desires, since the District's DOC will likely address only two turbines, we do not believe the DOC will provide the flexibility the applicant desires.

<u>Potential Contribution to a Violation of the One-Hour State Nitrogen Dioxide</u> (NO2) <u>Ambient Air Quality Standard</u>

At the April 14, 1998 workshop, we provided some initial information of our analysis of the project's potential contribution to a violation of the 1-hour state NO2 ambient air

quality standard.² We believe it important to identify that our preliminary results appear to be highly dependent on the project configuration, as well as, the turbines selected for the configuration. As stated at the workshop, our analysis is still developing and, at this time, it is just as likely as not, that we will conclude that the project will contribute to an ambient air quality standard violation. We also noted at the April 14, 1998 workshop that we had identified that the digitized terrain mapping data provided by the applicant as part of its AFC filing may contain errors, which could be leading to erroneous results. We recommend that the applicant review and provide corrected digitized terrain mapping data no later than 45 days prior to the issuance of the FSA, or it may not be reflected in our impact assessment.

Best Available Control Technology (BACT)

At the April 14, 1998 workshop, parties provided a status report on recent air regulatory agencies activities regarding BACT. Mr. Mark Abramowitz, representing Community Environmental Services and Goal Line Environmental Technologies (manufacturers of the SCONOx control technology), provided a brief summary of recent BACT evaluations made by the South Coast Air Quality Management District (AQMD). South Coast AQMD recently determined, based in part on the availability of the SCONOx emission control technology, that BACT for nitrogen oxide (NOx) emissions from combustion turbines from 3 to 32 MW should be considered to be 2.5 parts per million (ppm) averaged over 15 minutes. The selective catalytic reduction (SCR) manufacturers provided letters to the South Coast AQMD indicating that they were willing to provide SCR devices for larger turbines to control emissions to 2.5 ppm. However, South Coast AQMD postponed a BACT evaluation for larger turbines, pending additional analysis and information from their staff.

The Energy Commission staff notes that a BACT determination for the High Desert Power Project will be made as part of the District's preliminary DOC, and will be reviewed by ARB and EPA. The final determination will be made as part of the District's final DOC. We believe that the applicant should consider lower emission control levels as a means for reducing air emission reduction credit liabilities.

Emission Reduction Credits (ERCs or Offsets)

As noted above, Mr. Bob Zeller indicated that the District has sufficient information to conduct and issue its preliminary DOC, including information on the applicant's emission offset plan. However, we noted at the April 14, 1998 workshop that the March 18, 1998 offset plan submitted to the District did not have a substantial portion of the information requested in our data requests 13 through 18 filed on December 17, 1998.

² Staff conducts air dispersion modeling analyses for all projects it reviews. The proposed High Desert Power Project is a "large source" compared to most other sources permitted by air districts. Consequently, we believe imperative that we conduct a detail modeling analysis which will assess whether this large source will exacerbate air quality problems in the project vicinity.

The applicant indicated at the December 3, 1997 Energy Commission business meeting, in "Applicant's Response to Staff Data Requests of December 17, 1997" dated December 30, 1997, and in its January 15, 1998 responses to data requests 13 through 18 that the offset information would be provided in its March 19, 1998 offset package submittal to the District. However, at the April 14, 1998 workshop the applicant questioned our need for offset information. They reasoned that because offsets will ultimately be approved pursuant to District ERC banking rules and reviewed and approved by ARB and EPA, they did not understand why the we would need any additional information. In our second status report we stated:

"There are three specific components of the environmental analysis for which this [offset] information is required. First, staff believes it necessary to analyze the proposed mitigation measures to ensure that implementation of these measures will not result in any direct or secondary environmental impacts. For example, it has been suggested that NOx ERCs may be provided from the Mitsubishi Cement Corporation plant by burning tires (along with coal that is currently burned) in the facility to reduce NOx emission levels. Staff believes that the environmental documentation for this project needs to describe the potential public health impacts of the toxic emissions from the proposed tire burning. However, the applicant's March 18, 1998 offset plan does not include a detailed description of how emission reductions will be achieved at the Mitsubishi Cement Corporation plant, or for any other offset source identified."

At the April 14, 1998 workshop, Mr. Zeller indicated that the District had received an ERC banking application from Mitsubishi Cement Corporation some time ago. Mr. Zeller also stated that he believed there were more than sufficient NOx emission reductions for the Mitsubishi Cement Corporation to offset the project's NOx emissions. He also stated that the District would be willing to share the information in the banking application with staff. Ms. Sara Head, representing ENSR (applicant's consultant), indicated that she had a letter from Mr. John Dunlop, ARB Board Chairman, indicating that tire burning did not represent a significant increase in toxic emissions over coal firing. Ms. Head agree to provide a copy of the letter to the Energy Commission staff. Although the information from the District and ENSR will greatly assist our analysis. staff still has concerns. The files on the Mitsubishi Cement Corporation ERC banking application are substantial, and will require detailed review. We are not sure why the District has not acted on the ERC application, or how much additional analysis or time will be required. Our preliminary review indicates that critical information necessary to calculate the emission reductions is not readily evident. Consequently, the applicant's position that they are purchasing "approved ERCs" is not yet accurate, and it is not clear when it will be accurate. The information provide by ENSR is not conclusive regarding the health risks associated with supplemental burning of tires, and we are not sure whether secondary effects from use of this offset source have been or will be addressed in any environmental review, unless we include this analysis in our PSA or FSA.

In our second status report dated March 15, 1998 we stated:

"Second, staff believes that its analysis should demonstrate the nexus between a project's impacts and the measures proposed to mitigate those impacts. In the area of air quality, this portion of the analysis can be challenging, because it must include consideration of the effect of the district's programmatic efforts to achieve and maintain criteria pollutant levels below the state and federal ambient air quality standards. Nonetheless, staff believes it is important for the Commission to have before it not only the information the District requires for permitting but also information on what the project-specific effects under the District air quality program may be. Without the information requested in staff's data request numbers 13 through 18 (i.e. specific offset sources), staff can not provide this analysis in either the PSA or Final Staff Assessment (FSA).

Third, staff also believes the Energy Commission needs to assess whether the mitigation is likely to occur. Without information on the source test data from the offset sources and detailed information describing the methods of emission reductions, staff does not believe that it, nor any other party (including the District), can conclude that the proposed mitigation is likely to occur."

We concur with the applicant that purchase of <u>approved ERCs</u> would "go a long way" to showing a nexus between the project's impacts and proposed mitigation and demonstrating that they are likely to occur.³ Nevertheless, in this case all we have at this point is the applicant's promise to purchase approved ERCs from a list of possible sources. With the exception of the Mitsubishi Cement Corporation, we have no evidence that these sources are willing to negotiate with the applicant for purchase of these ERCs. Second, the District has not approved ERCs for any of the sources in the Mojave Desert AQMD.

Finally, the Warren Alquist Act addresses offset information -- Public Resources Code section 25523 (d)(2) states "[t]he commission may not find that the proposed facility conforms with applicable air quality standards pursuant to paragraph (1) unless the applicable air pollution control district or air quality management district certifies that complete emission offsets for the proposed facility have been identified and will be obtained by the applicant prior to the commission's licensing of the project ..." The applicant's March 18, 1998 offset plan acknowledges this requirement, and states that "HDPP will obtain letters of intent, option agreements, or other binding agreements to secure adequate ERCs for the project within the CEC licensing schedule for this project." We believe based on Public Resources Code section 25523 (d)(2), that option contracts or contracts securing adequate ERCs for the project are required for certification, not letters of intent.

We find ourselves in a difficult position -- on the one hand we are missing critical data needed to conduct our analysis and for the Energy Commission's certification of the proposal; on the other hand we do not wish to inadvertently interfere with negotiations

³ We believe that in some instances using offsets from one source versus another more distant source might provide greater assurance that project specific impacts are mitigated, even though both offset sources would be eligible under District regulations. We are not sure that such difference exists between the potential offset sources identified in this case. However, we do not know whether offset sources other than those identified will ultimately be secured by the applicant.

between the applicant and potential offset sources. Nevertheless, we believe that the Energy Commission needs to clearly identify what offset information is required for its certification and when that information is required in order to allow parties to prepare for the Energy Commission's evidentiary hearings on this proposal. We believe the following information is needed:

- 1. Letters of intent showing that potential ERC owners are willing to negotiate with the applicant for sale of at least 100 percent of each pollutant for which the project has an ERC liability.⁴
- 2. Description of the methods to be used to achieve the NOx emission reductions from the Mitsubishi Cement Corporation cement plant. Source tests or other data to substantiate both toxic and criteria pollutant emission reductions or increases. Note: Staff will obtain this information directly from the District.
- 3. Detailed description of the locations and length of roads to be treated (paved or treated with dust suppressants), vehicle counts and soil silt content.

We need this information at least 45 days prior to issuing the FSA, or it will not be reflected in our analysis. Failure to provide this information will likely result in the staff recommending denial of the project. (See the discussion below on project schedule for our recommendations on how to address the delay in receiving offset information, as well as, delays in delivery of other critical data and analyses for the project.)

LAND USE

Title 14, Code of Federal Regulations, section 77.13 specifies the types of construction that would require that the applicant notify the Federal Aviation Administration Administrator of their project. The Regional Manager of the Federal Aviation Administration (FAA) in the area of the project (the Western-Pacific Region Airports Division in Los Angeles) then performs an analysis and makes a determination whether the proposed construction would be a hazard to air navigation (14 CFR §§ 77.33 77.35). The Applicant submitted the appropriate notification to the FAA Los Angeles office in September, 1997. The FAA Los Angeles office responded on February 4, 1998 concluding that they did not object to the proposed construction. There was no discussion in the FAA analysis concerning thermal plumes from the emission stacks or cooling towers impacting air navigation.

On March 30, 1998, staff sent a letter to Mr. Mickeal R. Agaibi, representing FAA, requesting clarification of FAA's February 4, 1998 evaluation of the HDPP and potential

⁴ We believe that letters of intent are sufficient for the purposes of conducting our analysis for the FSA, however, we believe that option contracts or contracts securing offsets will be required for the Energy Commission's certification. Based on the applicant's discussion at the April 14, 1998, workshop there may be no advantage to delaying the requirement for obtaining option contracts or contracts to secure the offsets, since negotiations for letters of intent often evolve into negotiations for option contracts or contracts. Nevertheless, we're willing to offer this distinction if the applicant finds it to their advantage.

hazards to the airspace at SCIA (Airspace Case No. 97-AWP-0193-NRA). We requested the FAA to re-evaluate the stack height issue and present a written evaluation of whether the emission stacks intrude into the horizontal imaginary surface airspace or whether and how the 7:1 transitional surface airspace plays a role in the analysis. We also requested that FAA analyze the issue of thermal and visual plume hazards for the cooling tower and exhaust stack of the project. We requested a response by April 30, 1998.

We understand the FAA had requested the applicant to address the thermal plumes concern and submit a analysis of the thermal plumes on airport traffic patterns. At the April 14 workshop, we inquired as to the status of these studies to be submitted to the FAA, and learned that those studies were submitted "about a month ago" to the FAA. We requested that the applicant submit a copy of their analysis to us. We have not yet receive this information.

The California Public Utilities Code § 21659 requires that the Department of Transportation (Caltrans Aeronautics Program) to perform an analysis and issue a permit, if possible, to the applicant if the FAA finds a hazard to air navigation from the project in their analysis. The project cannot be constructed unless Caltrans Aeronautics issues their permit and finds that the construction of the project does not constitute a hazard to air navigation. A permit from Caltrans Aeronautics is not required if the FAA finds no hazard to air navigation.

Caltrans Aeronautics is awaiting the revised analysis from the FAA concerning the thermal plume impacts to determine whether they will be involved in the issuance of a permit. At this point, it is unlikely that we will receive the requested information from FAA with sufficient time to incorporate in our PSA. It is anticipated that by the time of the FSA filing, the FAA will have submitted their findings, and Caltrans will have provided their analysis, if necessary. These findings will be included in our FSA.

TRANSMISSION SYSTEM ENGINEERING

We have heard from the Southern California Edison Company (Edison) that certain information needed from the applicant in order to conduct the Stability Analysis for the Interconnection Study was not available. Mr. Andrew Welch confirmed that some information had not been provided, but also indicated that Edison did not have the updated version of a model needed to conclude the stability analysis. The missing data should be easily obtained, but the model update may delay Edison's delivery of the stability portion of the interconnection study by two weeks (i.e., from April 22, 1998 to May 6, 1998). Based on our discussions with the California Independent System Operator's (Cal-ISO), this delay will not result in a day-for-day slip in their review of the interconnection study. The Cal-ISO expects to receive the power flow analysis portion of the interconnection study within the next few days, and review of the stability analysis should only require two weeks, once it is received. The Cal-ISO's review of

the interconnection may be delayed, but not likely more than a week beyond the May 15, 1998 due date.

VISUAL RESOURCES

We have identified several potential significant visual impacts due to the project. One is placing the transmission line along the east side of the northern section of El Evado Road. Such a placement of large poles and conductors could degrade the currently high visual quality of the view toward the mountains to the east. We have initially identified two possible methods to mitigate the impact: 1) undergrounding this section of the transmission line, and 2) rerouting the transmission line. The former method may be cost prohibitive. Rerouting the transmission line farther east, down off the top of the plateau, will be further explored, including discussions with the City of Victorville. Rerouting the transmission line will also minimize the need to apply lights to towers for aviation safety as required by FAA.

A second potential significant impact would be the visible plume from the cooling towers associated with two combined cycle configurations. At times the plumes would be large and quite noticeable from sensitive areas, introducing a heavy industrial activity into views that are scenic. A possible method to mitigate this impact would be to use a wet-dry or dry cooling systems.

We will include a detailed analysis of the potential visual resources impacts in our PSA. We will also discuss the mitigation measure identified above in greater detail in our PSA.

WASTE MANAGEMENT

On April 22, 1998 we received a letter from California Unions for Reliable Energy (CURE) identify that "... it appears that the waste HDPP would generate and treat in its crystallizer would be a regulated hazardous waste. Pursuant to federal and state hazardous waste laws [Resource Conservation and Recovery Act ("RCRA") 42 U.S.C. § 6901 et seq.; Hazardous Waste Control Act, Cal Health& Safety Code § 25100 et seq.], HDPP would be required to obtain a hazardous waste facility permit from the California Department of Toxic Substances Control ("DTSC") for this treatment before it begins construction." CURE provided extensive analysis to support their findings. We have not yet completed a review of this information, nor concluded whether we agree with CURE's characterizations. We have begun discussions with DTSC to determine the requirements for the High Desert Power Project. Because this information was received late in the process, we will be unable to include an analysis of this issue in our PSA scheduled for release on May 15, 1998.

WATER RESOURCES

On March 16, 1998 the applicant submitted information on the wells proposed to provide a water supply for the project. However, the March 16, 1998 submittal did not contain a detailed "water plan" describing when or how water will be acquired from the Victor Valley Water Agency and the City of Adelanto, ownership of the proposed wells, how the wells will be operated and mitigation measures to offset impacts from groundwater pumping. The applicant provided this information on April 20, 1998. In addition, data describing the environmental consequences from construction and operation of two of the wells (and connecting pipeline) proposed to provide water for the project was not provided on March 16, 1998, but was provided on April 17, 1998.

Although we have only just received this information, we believe the information provided on water resources is incomplete and will require additional data requests or workshop discussions. We have scheduled a workshop on April 30, 1998 to discuss water resources and other environmental issues. Because we have just received the information on other environmental effects from construction of the wells and pipelines, we have not yet concluded whether this information is complete or whether additional workshops or data requests will be required to fully understand the environmental consequences of the proposal. We will be unable to provide a comprehensive analysis of water resources issues by the scheduled May 15, 1998 filing date for the PSA.

Although the Water Plan discusses obtaining a groundwater supply from the Victor Valley Water District and State Water Project water from Mojave Water Agency, there are several issues raised within the plan, including the role of the City of Adelanto in supplying water, that need to be further addressed. We believe, therefore, that we will need 45 days to complete our water resources FSA, after we receive needed clarification of the proposed water plan for the project. More important is the question of timing of local agency approval of the proposed water supplies. We strongly believe that approval of the proposed water supplies by Victor Valley Water District and Mojave Water Agency is necessary prior to certification of the project, and ideally, prior to issuance of the FSA. (See the discussion below on project schedule for our recommendations on how to address the delay in receiving water resources information, as well as, delays in delivery of other critical data and analyses for the project.)

STAFF'S COMMENTS ON THE PARTIES' SECOND STATUS REPORT

We have no comments on the applicant's March 25, 1998 status report. California Unions for Reliable Energy (CURE) also filed a status report on March 25, 1998, which addressed the delay in receiving emission offset information, discovery and the transmission line interconnection study. With regard to CURE's status report on emission offsets, we concur with CURE's summary of the facts. Although staff had not yet reached a conclusion in its March 25, 1998 second status report regarding the likelihood of concluding the High Desert Power Project on schedule, staff now agrees

with CURE's conclusion, on page 7 first paragraph, that the schedule for the project is now in jeopardy. Staff has no comments on CURE's status report regarding discovery.

Regarding CURE's comments on the transmission line interconnection study, we do not share CURE's concerns regarding potential inadequacies of the study. We believe that the interconnection study will address relevant considerations, while other concerns raised by CURE do not warrant analysis. Attachment A to this status report presents our specific comments on points raised by CURE.

PROJECT SCHEDULE

The Committee's March 6, 1998 "Revised Scheduling Order" directed staff to file our Preliminary Staff Assessment (PSA) on May 15, 1998. We will publish our PSA on May 15, 1998. Although the PSA will be incomplete for air quality, alternatives, land use, public health, transmission line engineering, waste management, water resources as well as other areas affected by the new additional natural gas pipeline (biological, cultural, and paleontological resources), we believe the PSA will be substantially complete for need conformance, safety and fire protection, hazardous materials, traffic, noise, visual resources, socioeconomics, facility design, reliability, and efficiency.

Traditionally, we use the PSA as a vehicle for resolving issues between the parties and to narrow the scope of adjudicated issues in the evidentiary hearings. During the period between publishing the PSA and Final Staff Assessment (FSA), we conduct workshops to discuss our findings, proposed mitigation and proposed compliance monitoring requirements. Based on these workshop discussions, we will refine our analysis, correct errors, and finalize conditions of certification to reflect areas where we have reached agreement with the parties. We believe that the High Desert Power Project PSA will serve these purposes for many technical areas. However, for those technical areas that are incomplete, the PSA will not serve its purpose. In addition, we note that the incomplete areas are those most likely to be adjudicated. One solution might be to reissue the PSA for those technical areas that are now incomplete, after we receive the necessary information.

Although the Committee has not adopted a schedule beyond delivery of the PSA, delays in receiving critical information have caused us to question whether we will be able to prepare a complete Final Staff Assessment (FSA) on a traditional schedule, and ultimately whether the Energy Commission will be able to reach an affirmative decision for the High Desert Power Project in the mandated 12 months. At this time, we believe that the FSA will either: 1) need to be delayed in order to ensure that a complete analysis is presented, 2) be incomplete and require supplemental testimony; or 3) recommend that the project be denied due to insufficient information to support the findings mandated by the Warren Alquist Act for an affirmative decision. Eight events have occurred since the last status report which cause us concern:

- 1. the identification of a new additional 26 mile natural gas pipeline:
- 2. delay in receiving the final Determination of Compliance (DOC) from the Mojave Air Quality Management District (District);
- 3. delay in receiving turbine manufacturers air quality data;
- 4. delay in receiving a coherent offset proposal
- 5. delay in receiving findings from the Federal Aviation Administration regarding aviation hazards associated the project:
- 6. delay in receiving the interconnection study:
- 7. delay in receiving the water plan for the project; and
- 8. receipt of information claiming that the waste crystallizer streams are hazardous wastes.

Some of the eight events described above have clearly been in the applicant's control (e.g., delivery of a water plan, offset proposal, and turbine manufacturer's data), others could have been pursued earlier in the process (e.g., the interconnection study, the additional natural gas pipeline and identification of waste classification of the crystallizer), while others are now outside of the applicant's control (e.g. delay of the DOC and FAA review of aviation hazards).

In order for staff to issue the FSA on a traditional schedule, we would need all the information identified in numbers one through eight above by May 15, 1998. Without that information we will have no other alternative but to recommend denial of the High Desert Power Project application, if we must file the FSA on the traditional schedule. We are concerned about the applicant's ability to provide the information by May 15, 1998. We could recommend that the Committee terminate the process now, based on the applicant's failure to provide necessary information (Cal. Code Regs. tit. 20, § 1720.2). However, we believe this option is premature given the possibility that the applicant could provide the necessary information in time for a Energy Commission's decision within the mandated 12 months, if we were to use a performance based schedule.5

We believe there are three variations of a performance based schedule, all of which assume staff issues its PSA on May 15, 1998 (also see Figure 1):

Option A. bifurcate the FSA;

Option B. establish performance dates for applicant as late in the proceeding as possible (i.e., June 1, 1998) to allow the applicant to provide the

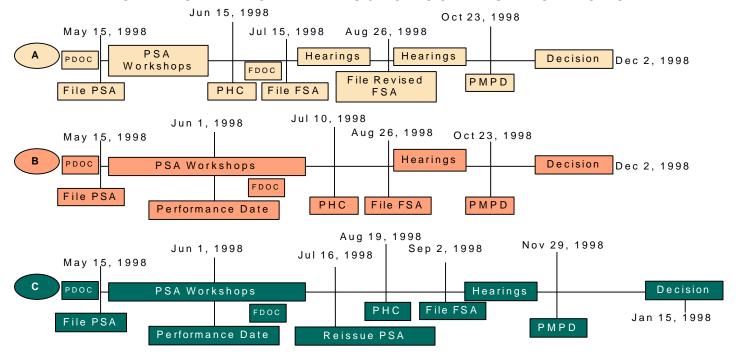
information in numbers one through eight above and then file the

complete FSA; or

⁵ A performance based schedule would identify that when the applicant provides last of the information identified in numbers one through eight above by June 1, 1998, we would prepare our FSA 45 days later. If the applicant failed to meet its performance date(s), the schedule would either need to be extended or the we would recommend denial of the application in our FSA.

option C. establish performance dates for applicant as late in the proceeding as possible (i.e., June 1, 1998) to allow the applicant to provide the information in numbers one through eight above, then reissue the PSA for those areas that are now incomplete, and then file the complete FSA 45 days later. This option would likely require extending the schedule for the project by 45 days.

Figure 1
HIGH DESERT POWER PROJECT SCHEDULE OPTIONS



We have in some cases prepared the FSA with some sections incomplete or missing, and filed supplemental testimony later, which was presented at supplemental evidentiary hearings. However, this "bifurcation" of our analysis (Option A) is undesirable because it presents the public and decision makers with an incomplete view of the consequences of the applicant's proposal. We, therefore, do not recommend this option.

Table 1 shows the schedule for Option B events assuming performance dates of June 1, 1998, and publishing of our FSA 53 days later. The Option B schedule should result in a final decision within the 12 month mandate, December 2, 1998. The primary disadvantages of Option B schedule are that it would reduce the Committee's time to prepare mandated documents and reduces the parties time to review these documents.

The Option C schedule would also establish performance dates of June 1, 1998, to allow the applicant to provide the necessary information in numbers one through eight above, and then reissue the PSA. The FSA would follow 45 days after the reissued PSA. Option C would extend the schedule for the project by 45 days, however, neither the staff nor the Committee has this option without the applicant's concurrence. Table 2 shows the schedule for this alternative, and shows that a final decision is reached on January 15, 1999. Staff recommends the Option C alternative since it preserves the parties' opportunities to conduct detailed analyses for the project, and it preserves the parties' opportunities to review important documents associated with the project's review.

RKB:rkb

Attachments

cc: Proof of Service
Chuck Fryxell, APCO Mojave Desert
Matt Haber, U.S. EPA
Charlie Kraus, VVWD
Mark Zeiring, CPUC
Rebecca Jones, CDFG

Ray Menebroker, ARB Robert G. Zeller, Mojave Desert AQMD Dan Gallagher, VVWRD Norman Caouette, MWA Manuel Alvarez, Edison Table 1
Delay FSA for the High Desert Power Project (97-AFC-1)

Delay FSA for the High Desert Power Project (97-AFC-1)			
DATE	DAYS LEFT TO DECISION	EVENT	
Apr 14, 1998	232	Data Response & Issue Resolution Workshop	
Apr 17, 1998	229	Applicant submits additional environmental information on well and well pipeline	
Apr 20, 1998	226	Applicant submits water plan	
Apr 24, 1998	222	Parties submit status report (3) to Committee; request conference if necessary	
Apr 28, 1998	218	Committee Scheduling Conference	
Apr 30, 1998	216	Land Use, Biology, Cultural, Paleontological and Water Resources Issues Workshop in Victorville	
Apr 30, 1998	216	Staff receives information from FAA	
May 6, 1998	210	Edison completes transmission interconnection study, and applicant submits study including stability analysis	
May 11, 1998	205	APCD files Preliminary Determination of Compliance	
May 15, 1998	201	File Preliminary Staff Assessment	
May 21, 1998	195	Cal-ISO completes review of transmission interconnection study	
Jun 1, 1998	184	Applicant submits information on Additional Natural Gas Pipeline *	
Jun 1, 1998	184	Applicant submits supplemental information on Water Plan *	
Jun 1, 1998	184	Applicant submits information of Emission Reduction Credits *	
Jun 1, 1998	184	Applicant submits revised digitized map terrain data *	
Jun 1, 1998	184	Applicant Submits Gas Turbine Data *	
Jun 26, 1998	159	File Prehearing Conference statements	
Jul 10, 1998	145	Prehearing Conference	
Jul 10, 1998	145	APCD files Final Determination of Compliance	
Jul 24,1998	131	File FSA	
Aug 7, 1998	117	Start Hearings	
Aug 21, 1998	103	Conclude Hearings	
Oct 15, 1998	48	Committee Issues Draft Presiding Members Proposed Decision (PMPD)	
Nov 16, 1998	16	Parties comment on Draft PMPD	
Nov 25, 1998	7	Committee Issues Revised PMPD	
Dec 2, 1998	0	Commission Business Meeting Adoption of Revised PMPD	
* Performance	* Performance due date!		

Table 2
Reissue PSA and Extend Schedule for the High Desert Power Project (97-AFC-1)

Reissue PSA and Extend Schedule for the High Desert Power Project (97-AFC-1)		
DATE	DAYS LEFT TO DECISION	EVENT
Apr 14, 1998	276	Data Response & Issue Resolution Workshop
Apr 17, 1998	273	Applicant submits additional environmental information on well and well pipeline
Apr 20, 1998	270	Applicant submits water plan
Apr 24, 1998	266	Parties submit status report (3) to Committee; request conference if necessary
Apr 28, 1998	262	Committee Scheduling Conference
Apr 30, 1998	260	Land Use, Biology, Cultural, Paleontological and Water Resources Issues Workshop in Victorville
Apr 30, 1998	260	Staff receives information from FAA
May 6, 1998	254	Edison completes transmission interconnection study, and applicant submits study including stability analysis
May 11, 1998	249	APCD files Preliminary Determination of Compliance
May 15, 1998	245	File Preliminary Staff Assessment
May 21, 1998	239	Cal-ISO completes review of transmission interconnection study
Jun 1, 1998	228	Applicant submits information on Additional Natural Gas Pipeline *
Jun 1, 1998	228	Applicant submits supplemental information on Water Plan *
Jun 1, 1998	228	Applicant submits information of Emission Reduction Credits *
Jun 1, 1998	228	Applicant submits revised digitized map terrain data *
Jun 1, 1998	228	Applicant Submits Gas Turbine Data *
Jul 10, 1998	189	APCD files Final Determination of Compliance
Jul 16, 1998	183	Reissue PSA for those areas that are now incomplete
Aug 5, 1998	163	File Prehearing Conference statements
Aug 19, 1998	149	Prehearing Conference
Sep 2, 1998	135	File FSA
Sep 16, 1998	121	Start Hearings
Sep 26, 1998	111	Conclude Hearings
Nov 29, 1998	47	Committee Issues Draft Presiding Members Proposed Decision (PMPD)
Dec 31, 1998	15	Parties comment on Draft PMPD
Jan 9, 1999	6	Committee Issues Revised PMPD
Jan 15, 1998	0	Commission Business Meeting Adoption of Revised PMPD
* Performance due date!		

Attachment A STAFF COMMENTS ON California Unions for Reliable Energy (CURE) Second Status Report, March 25, 1998

CURE Status Report, page 9, section II "The Interconnection Study Will Not Analyze All Three Configurations"

CURE stated that "[i]t appears that the HDPP interconnection study will not address all three configurations." Staff believes that the study, in combination with the California Independent System Operator's (Cal-ISO) congestion management protocol¹ could effectively assess the impacts of all three configurations. Southern California Edison Company (Edison) and the Cal-ISO have indicated to staff that the levels² of the three most likely configurations will be studied. CURE's statement is based on its belief that Edison will conduct a screening analysis to determine the worst case configuration for its sensitivity study, and will not actually analyze all three configurations. Edison and the Cal-ISO have decide to study the system at 832 megawatts (worst-case) and conduct a sensitivity analysis at 678 megawatts (personal communication with Robert Sparks, Cal-ISO, April 23, 1998). Staff believes this should address CURE's concerns

CURE Status Report, page 10, section III "Transmission Related Issues That the HDPP Interconnection Study Will Not Resolve,

A. What will the environmental impacts of congestion caused by HDPP be?"

CURE notes that new generation in the Lugo area will exacerbate congestion. While certainly "congestion" must be accounted for in the dispatch of the system by the Cal-ISO, staff believes that congestion management will likely be adequate to maintain reliability. The results of the Interconnection study will provide the answers to this question.

CURE also states that curtailment of renewable generation in favor of fossil fueled generation creates potentially significant environmental impacts that the Energy Commission must consider. Staff disagrees. There are many factors that affect how the Cal-ISO dispatches the system on a given day, and it is not possible to accurately predict dispatch for any year of operation of the HDPP. In addition, dispatching will be determined by assessing reliability and total costs. In deciding how to dispatch, the Cal-ISO will treat renewable energy the same as any other energy source, and consumers will be able to purchase it if they are willing to pay the price charged by the retail supplier. The Energy Commission should not interfere with the accounting

Attachment A 1 April 24, 1998

¹ Congestion occurs at a bottleneck; an analogy would be at the junction of a "Y". Congestion occurs when the power to be transmitted over a path must be reduced to avoid a reliability criteria violation at a point or section of a path. Criteria violations that may result in a congestion path are typically due to thermal overloads, but may also be caused by a voltage or stability problems.

² The three output levels are 647 Megawatt, 701 Megawatt, and 774 Megawatt net on a hot day--92 degrees Fahrenheit (HDPP AFC page 3.6.2)

mechanism of the Cal-ISO by protecting renewable energy from congestion costs that would normally occur.

CURE Status Report, page 12, section III.B. "Where should generator output be delivered?"

The applicant proposes to deliver the High Desert power output to Edison's Victor switching station which would be converted to a substation. CURE states that a connection at some other substation may perhaps be the only feasible mitigation measure for presumed biological impacts from the proposed line and route. CURE also suggests (accurately) that the Interconnection study will not analyze the reliability implications of interconnections at other termination points.

It is likely that the location of the HDPP will cause a need for downstream facilities. If, however, facilities are identified, the construction of these facilities creates significant adverse impacts, the Commission could require the analysis of other terminations as mitigation of the impacts as well as other mitigation measures. However, given the cost, complexity and time requirements for analyses, staff does not believe it is reasonable to require multiple interconnection studies absent a showing of a significant problem with the proposed interconnection. Moreover, the fact that use of some alternatives (such as LADWP's Victorville substation) would preclude the applicant from participating in the competitive market is a factor that the Energy Commission would consider in selecting between alternative mitigation options.

CURE Status Report, page 12, section III.C. "How should generator output be delivered?"

The applicant has analyzed the cost and reliability implications of an outlet line to both the Victor substation and the LADWP Victorville substation (HDPP AFC Appendix AA, Response to CURE Data Request 88, Attachment TS-88). Staff believes that a two circuit line is not required for reliability conformance, is not cost effective,³ and supports the applicants proposal to use a single circuit 230 kilovolt line with adequate capacity to accommodate the largest power output option.

Although the reliability of short outlet lines is extremely high, the system is planned, designed, and operated to accommodate outage of the largest generating units because they may be forced off line by maintenance problems (or even the unlikely outage of an outlet). As a result, the use of a two circuit line is not required by applicable reliability criteria or industry standards in the state of California.

CURE also raises an issue with regard to losses. They state that "The HDPP IS (Interconnection Study) will not include any loss analysis. The Commission will thus not be able to use the HDPP IS to evaluate the relative merits of alternative methods of delivering generator output". The applicant provided extensive analysis of outlet line

³ A single circuit line with larger conductors may be more cost effective. Staff will address this topic in the PSA.

losses and facility costs for all termination scenarios (HDPP AFC Appendix AA). These analyses do not generally include relative system losses. CURE's concern is apparently that the HDPP IS will not include any system loss analysis.

Staff disagrees that requiring such an analysis is justified. CURE grossly overstates the degree to which High Desert will increase system losses. CURE references the AFC wherein it states that system losses will be increased from "101 to 110 percent of their pre-Project levels". Although staff believes that the power flow results did show such an increase, a power flow study designed to highly stress the system so that overloads and voltage problems can be identified; should not be used to identify the increase or decrease in system losses.

In addition, staff believes it is impractical to assess system losses in 1998 for 2001 operation. Such an assessment is very laborious and costly, and staff questions whether market clearing prices and energy costs are sufficiently known now to predict conditions in 2001 through 2021.

Furthermore, the Cal-ISO power flow model which calculates hour-ahead losses for use in the generator meter multiplier⁴, will be applied to the applicant's generation. Staff believes preliminarily that this method also sends the right signal regarding energy conservation, in that generating units and imports which are remote from the loads will pay a premium to get their power to market⁵. Thus CURE's concern has already been addressed in the development of the Cal-ISO generation meter multipliers.

Finally, CURE also raised concerns that "the Commission will not be able to fully evaluate how HDPP will affect...emissions under different scenarios". Staff believes that estimates of the effects of generation dispatch on air emissions would be complete speculation and ill advised

CURE Status Report, page 13, section III.D. "Will Operation of High Desert Affect Must-Run Generation Requirements?"

The Cal-ISO has established must-run local generation contracts to assure that generation critical to reliability is available for dispatch and is currently studying, in conjunction with the participating transmission owners and other industry participants the requirements for 1999 and initiating studies for 2003⁶. The draft studies are evaluating potential cost effective ways to reduce must-run generation. The methods evaluated for 1999 only include short lead time transformer additions. No decisions

⁴ California Independent System Operator Scheduling Protocol SP 4, Transmission System Loss Management, April 1998.

⁵ Staff believes this is potentially a much more accurate method than past methods where "postage stamp" rates were set or "loss adjustment factors" were applied. A loss adjustment factor of .95 would mean that a 100 Megawatt generator would be paid for 95 Megawatts, not 100 due to a 5 Megawatt system loss increase. The Cal-ISO meter multiplier will result in similar results.

⁶ Cal-ISO Long Term Must-Run Assessment Support Group (Cal-ISO Must-Run Study Progress Report, South Coast Air Basin Area, 3/6/98, Draft)

have been made to date (personal communication with Steve Mavis, Cal-ISO, April 1998).

CURE believes that because the interconnection study does not analyze system reliability with future must-run units (which are not yet identified), the Commission will not know how High Desert might impact future decisions about which units will be determined must-run. The Energy Commission should reject CURE's speculation. Even if reliable information was available today on the year 2001 must-run units, the Energy Commission's decision could only be based on a determination of whether the project has acceptable effects on reliability not whether it affects must-run generation or potential additional transformer facilities. The Commission is required to evaluate facilities which are a direct consequence of High Desert or which are a reasonably foreseeable future consequence of High Desert. However, the future must-run units and future transformers do not meet this test.

CURE Status Report, page 15, section IV. "Reliability Related Issues That the HDPP Interconnection Study May Not Adequately Address, A. What Peak Loads Should the Study Assume?"

CURE states that "the ISO in its must-run analysis assumes one year in five heat storm conditions and that the High Desert Interconnection Study will consider on-peak and off-peak conditions. Staff notes that the two statements are not necessarily contradictory and believes that the ISO will inform the Energy Commission if it determines that the study is unacceptable for this or any other reason.

CURE Status Report, page 17, section IV.C. "What Generation Assumptions should be made?, 1.Los Angeles Basin Generation"

As CURE states "the ISO has produced a list of specific 1998 must-run units within the L.A. Basin and has identified potential reductions to that list by 1999 and by 2003" CURE suggests that the Interconnection study should consider two scenarios, one with the current system and one with the system as it might be in 2001 with the new list of potential must run units. Staff disagrees for the following reasons:

First, there is no nexus between such studies and the decisions the Commission must make in this proceeding. If one study with a group of assumptions resulted in a new or modified downstream facility which was directly attributable to High Desert or which was a reasonably foreseeable consequence of High Desert, then the comparison of the two scenarios might be germane. However, staff can't conceive of a modification that would be required to the applicant's proposed project that will affect must-run generation or require the construction of potential downstream facilities. If future decisions by the Cal-ISO and the industry result in different must-run units or transmission additions, as a result of the HDPP, the transmission additions will come under applicable regulatory review with consequent conformance with CEQA at this time.

Staff initially recommended that the Cal-ISO and Edison study the two scenarios. However, the Cal-ISO and Edison did not accept staff's recommendation and the study plan proposes to study the High Desert project with existing must-run generation. Staff concluded that this was reasonable given the uncertainties that new Edison transmission facilities would be on line in 1999 or 2001. Staff will re-evaluate this topic upon receipt of the interconnection study and the latest information on the likelihood of Edison committing to new transmission facilities which could be considered in the interconnection study.

CURE Status Report, page 18, section IV.C 2. "Coolwater Generation"

CURE notes that the interconnection study plan does not indicate whether the Coolwater generation will or will not be included in the input assumptions. Staff will not speculate on the implications of this topic until we have reviewed the study.

CURE Status Report, page 20, section IV.D. "What Outage Contingencies Should be Studied?"

CURE's concern is that because the study plan did not specifically identify the classes of contingencies (e.g, one circuit out of service, two circuits out of service) that Edison's and the Cal-ISO analysis would be inadequate. Staff will not speculate on this issue; we and the Cal-ISO will review the study and it will speak for itself.

CURE Status Report, page 20, section IV. E. "115 kV System Reliability"

CURE's concerns are that the 115 kilovolt system in the Kramer/Victor area will not be adequately evaluated and the study "will not provide the Commission with all the information it needs for a full reliability analysis". Staff will review the study when it arrives and if necessary discuss this topic with Edison and the Cal-ISO.